

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A computerized system for analyzing student performance data and providing feedback based on the student performance data, the system comprising:

a computer network interface module configured to receive student performance data and transmit recommendation data via a computer network;

a data acquisition module configured to receive the student performance data from the computer network interface module and reformat the student performance data;

a performance analysis module configured to receive the reformatted student performance data from the data acquisition module and generate analysis data by analyzing the reformatted student performance data, wherein the analysis data includes a learning curve and a corresponding best fit curve; and

a real-time feedback generation module configured to receive the analysis data from the performance analysis module and generate the recommendation data based on the analysis data, wherein the computer network interface module receives the recommendation data from the feedback generation module and transmits the recommendation data onto the computer network to a school official, wherein the recommendation data comprises a plurality of courses of action at the level of each class and school.

2. (Original) The system of Claim 1, wherein the student performance data indicates a source of the data.

3. (Original) The system of Claim 2, wherein the data source is a school, a teacher or a student.

4. (Original) The system of Claim 2, wherein the student performance data comprises indexing the data with codes that have been pre-assigned to the school, teacher or student.

5. (Original) The system of Claim 1, wherein the student performance data comprises a score achieved by the student on a performance evaluation, and wherein the performance evaluation is a game, a lesson, a quiz or a test.

6. (Original) The system of Claim 5, wherein the student performance data comprises encrypted information indicating a student, teacher, or school that is the source of the test data.

7. (Original) The system of Claim 5, wherein the game comprises a spatial temporal math video game.

8. (Original) The system of Claim 7, wherein the student performance data comprises a sequence of consecutive scores achieved by the student on the math video game.

9. (Canceled)

10. (Original) The system of Claim 1, wherein the computer network is the Internet.

11. (Original) The system of Claim 1, wherein the analysis data is stored on a relational database, and wherein statistical and data mining analysis is performed on the analysis data to determine a specific learning problem of the student and to generate a remedial recommendation.

12. (Original) The system of Claim 1, wherein the analysis data is stored on a relational database, and wherein statistical and data mining analysis is performed on the analysis data to determine one or more universals of learning encoded in the analysis data.

13. (Currently amended) A computerized system for analyzing student performance data and providing feedback based on the student performance data, the system comprising:

a student computer system configured to administer a spatial temporal performance evaluation and record student response data;

an education module configured to receive the student response data from the student system and generate student performance data indicative of the performance evaluation;

an analysis and feedback module configured to receive the student performance data from the education module and generate feedback data by performing an analysis of the student performance data, wherein the analysis of the student performance data identifies a level of the student's mastery of the subject matter, wherein the levels are 1) mastery of the subject matter has already been obtained, 2) mastery of the subject matter is being obtained, and 3) mastery of the subject matter is not being obtained, wherein analysis of the student performance data comprises comparing the student performance data to a standard curve for the performance evaluation; and

a school official computer system configured to receive the feedback data from the analysis and feedback module, wherein the feedback data comprises recommendations to a school official for enhancing student performance on subsequent performance evaluations, wherein the recommendations comprise a plurality of courses of action.

14. (Original) The system of Claim 13, wherein the performance evaluation is a game, a lesson, a quiz, or a test.

15. (Original) The system of Claim 14, wherein the game is a spatial temporal math video game.

16. (Original) The system of Claim 13, wherein the student performance data indicates a source of the data.

17. (Original) The system of Claim 13, wherein the student performance data comprises a score achieved by the student on a performance evaluation, and wherein the performance evaluation is a game, a lesson, a quiz or a test.

18. (Previously presented) The system of Claim 13, wherein the student performance data comprises encrypted information indicating a student, teacher, or school that is the source of the test data.

19. (Previously presented) A method of analyzing successive performances by a student for a computerized quiz and providing feedback based on the performances, the method comprising:

- determining, via a computer system, whether a student score is above a threshold passing score to identify that the student has achieved a passing score on a quiz;

- comparing the passing score of the student to at least one score obtained from at least one subsequent quiz;

- determining, via the computer system, whether the student is authorized to progress to a next task of a curriculum or whether the student needs assistance from an instructor based on the comparison;

- analyzing the passing score of the student and the at least one subsequent quiz score to generate a learning curve and determine whether a deviation in a learning rate exists;

- calculating a best fit curve to the learning curve;

- extrapolating the best fit curve to determine whether the threshold passing score will be reached within a maximum allotted number of times of taking the quiz; and

- generating, via the computer system, feedback data based on the determination of whether the threshold passing score will be reached within the maximum allotted number of times of taking the quiz.

20. (Previously presented) The method of Claim 19, wherein the feedback data comprises recommending that the student continue taking the quiz, recommending that the instructor provide assistance to the student, or recommending that the student continue taking the quiz with further observation and reevaluation by the instructor.

21. (Original) The method of Claim 19, wherein the determining whether a deviation in a learning rate exists comprises graphing the quiz scores against the number of times the quiz is taken for the most recent day.

22. (Original) The method of Claim 21, wherein the determining whether a deviation in a learning rate exists further comprises comparing the quiz scores against the number of times the quiz is taken for all days the quiz is taken.

23. (Previously presented) A method of developing a computerized game for teaching mathematical concepts to a student, the method comprising:

determining a mathematical concept to be taught to a student;

formulating a basic spatial temporal test of the mathematical concept;

administering, via a computer system, the basic spatial temporal test to the student;

testing an initially designed game of the mathematical concept to obtain a progress curve of game scores;

analyzing the progress curve to determine whether it indicates successful learning and retention of the mathematical concept;

comparing a score on the initially designed game with a score on the basic spatial temporal test to determine whether the game score is commensurate with the test score;

administering, via the computer system, a diagnostic quiz of the mathematical concept to the student;

comparing the game score to a score on the diagnostic quiz to determine whether the game score is commensurate with the diagnostic quiz score;

determining that the game is deficient if the game score is not commensurate with the diagnostic quiz score;

determining adjustments to the game or the diagnostic quiz based on the comparison of the game score to the diagnostic quiz score if the game is deficient;

redesigning the game based on the adjustments to the game or the diagnostic quiz;
and

integrating the redesigned game into an educational curriculum.

24. (Previously presented) A computer readable storage medium having stored thereon instructions that when executed by a computer processor perform a method of analyzing successive performances by a student for a computerized game and providing feedback based on the performances, the method comprising:

determining whether a student score is above a threshold passing score to identify that the student has achieved a passing score on a quiz;

comparing the passing score of the student to at least one score obtained from at least one subsequent quiz;

determining whether the student is authorized to progress to a next task of a curriculum or whether the student needs assistance from an instructor based on the comparison;

analyzing the passing score of the student and the at least one subsequent quiz score to generate a learning curve and determine whether a deviation in a learning rate exists;

calculating a best fit curve to the learning curve;

extrapolating the best fit curve to determine whether the threshold passing score will be reached within a maximum allotted number of times of taking the quiz; and

generating feedback data based on the determination of whether the threshold passing score will be reached within the maximum allotted number of times of taking the quiz.

25. (Previously presented) The computer readable storage medium having stored thereon instructions that when executed by a computer processor perform the method of Claim 24, wherein the feedback data comprises recommending that the student continue taking the quiz, recommending that the instructor provide assistance to the student, or recommending that the student continue taking the quiz with further observation and reevaluation by the instructor.

26. (Previously presented) The computer readable storage medium having stored thereon instructions that when executed by a computer processor perform the method of

Claim 24, wherein the determining whether a deviation in a learning rate exists comprises graphing the quiz scores against the number of times the quiz is taken for the most recent day.

27. (Previously presented) The computer readable storage medium having stored thereon instructions that when executed by a computer processor perform the method of Claim 26, wherein the determining whether a deviation in a learning rate exists further comprises graphing the quiz scores against the number of times the quiz is taken for all days the quiz is taken.

28. (Previously presented) The system of Claim 1, wherein the plurality of courses of action comprises an optional course of action.

29. (Previously presented) The system of Claim 1, wherein the plurality of courses of action comprises a corrective course of action.

30. (Previously presented) The system of Claim 29, wherein the corrective course of action comprises repeating a level of a game.

31. (Previously presented) The system of Claim 13, wherein the plurality of courses of action comprise an optional course of action.

32. (Previously presented) The system of Claim 13, wherein the plurality of courses of action comprise a corrective course of action.

33. (Previously presented) The system of Claim 32, wherein the corrective course of action comprises repeating a level of a game.

34. (Previously presented) The system of Claim 13, wherein the education module is further configured to generate student performance data after each student response data received.

35. (Previously presented) The system of Claim 1, wherein the student performance data comprises a game result.

36. (Previously presented) The system of Claim 1, wherein one of the plurality of courses of action comprises a school principal making a personnel decision for a particular class based on the analysis data.

37. (Canceled)

38. (Previously presented) The system of Claim 1, wherein one of the plurality of courses of action comprises the school official entering a command onto the computer network that enables a particular student to advance to a higher level of the game.

39. (Previously presented) The system of Claim 13, wherein the plurality of courses of action include having the school official review quiz-taking skills with the student and having the student review key words or phrases before retaking a quiz.

40. (Previously presented) The computer readable storage medium having stored thereon instructions that when executed by a computer processor perform the method of Claim 24, wherein each quiz can have a different minimum slope.

41. (Currently amended) A method of analyzing successive performances by a student for a computerized quiz and providing feedback based on the performances, the method comprising:

determining, via a computer system, whether a student score is above a threshold passing score to identify that the student has achieved a passing score on a quiz;

comparing the passing score of the student to at least one score obtained from at least one subsequent quiz;

determining, via the computer system, whether the student is authorized to progress to a next task of a curriculum or whether the student needs assistance from an instructor based on the comparison;

analyzing the passing score of the student and the at least one subsequent quiz score to generate a learning curve based on the scores and determine whether a deviation in a learning rate exists;

calculating a best fit curve to the learning curve;
determining a slope of the best fit curve; and
generating feedback data based on the determination of whether the slope of the best fit curve is greater or equal to a minimum slope for the quiz.

42. **(Currently amended)** A method of analyzing successive performances by a student for a computerized quiz and providing feedback based on the performances, the method comprising:

determining, via a computer system, whether a student score is above a threshold passing score to identify that the student has achieved a passing score on a quiz;

comparing the passing score of the student to at least one score obtained from at least one subsequent quiz;

determining, via the computer system, whether the student is authorized to progress to a next task of a curriculum or whether the student needs assistance from an instructor based on the comparison;

analyzing the passing score of the student and the at least one subsequent quiz score to generate a learning curve based on the scores and determine whether a deviation in a learning rate exists;

comparing the learning curve of the student to a standard curve for the quiz, wherein each particular quiz has a corresponding standard curve; and

generating feedback data regarding the stage of learning for the student based on the comparison.

43. **(New)** The method of Claim 41, wherein the minimum slope for the quiz is determined by calculating the point at which the best fit curve crosses a horizontal line corresponding to a passing score.